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JANUARY, 1890.

THE SEASON just passed has been a remarkable one to gardeners and fruit-growers in many parts of our country. In all our experience we cannot recall a growing season in which the weather has been so damaging. Untimely frosts, excessive and long continued rains, and, in many places, floods, and elsewhere droughts, have combined with insects and mildew and rot to destroy and minimize the crops. It is reasonable to suppose that the year which we have now entered has fewer discouragements in store for the soil tiller. Let us start out with the hope that kinder skies and airs await us, and with a determination to make our experience better our future efforts. Of course, the experience of the past year has shown us that in certain of her moods we can do little to pacify Dame Nature, and before the inevitable we must bow. But what is the inevitable? To different persons it appears differently, and the foreseeing, or prudent and energetic man may avert or mitigate somewhat the evil of an event which may overwhelm one less fortunately endowed. All experience shows that the most vigilant and active cultivators, who do their work in the best season, have the advantage over laggards. To get behind with work invites calamity.

The question of the present standing of horticulture after a season of sore trial is one of general interest.

Market gardening, in this country, has a great invested capital, and a partial failure of crops for a season can check but slightly its impetus; and this is equally true of fruit-growing. As a business, market gardening is extending rapidly, keeping pace with the growth of population; but, not only so, the raising of vegetables is also receiving increased attention by the farmer and the village resident, as a means of supplying their private tables with a variety of excellent food. The intercourse with all countries is now so close that any new vegetable finds its way without delay into the trade. And this leads to the statement often made within a few years past that there is no longer any necessity of assistance by the general government in the introduction and dissemination of all that class of goods handled by our enterprising seedsmen. What the present administration intends in this matter is somewhat doubtful, for what is said concerning it in the late report of Secretary RUSK, is apparently oracular. What was recommended by Commissioner COLMAN was that the distribution of seeds of probable, but unknown, value be made a part of the business of the experiment stations; they to supply the seeds to a number of cultivators in their locality, who should report the results of cultivation to the stations, thus making public their character

and comparative value. This would remove the seed distribution from the hands of Congressmen. As we understood the idea of Commissioner COLMAN, it was that a number of tests should be made by practical growers in the vicinity of each Experimental Station or Agricultural College, regarding the average result of such tests more reliable than a single test by the station. So far as sending the seeds to the stations for trial, the Secretary, in his report, says this method "will be sedulously adhered to." But he also explains that this will be done in order "to arrive at reasonable conclusions as to the relative value of seeds so furnished, so that we may be more certain of furnishing to our farmers in the various sections represented by these institutions the seeds best adapted to their wants and most certain to insure them good returns." If the Secretary means what his language implies, and charitably it is to be hoped that he does not, then the intention is to have the seeds tested, and those of most value distributed to the farmers, so that they may be most certain to get "good returns." Heretofore the seeds have been distributed through the community ostensibly to learn their character, but this end is henceforth to be attained by the stations, and then the seeds distributed, so that the cultivators can get "good returns." In what way is this distribution to be made? There is no other way available but through the Congressmen. Is it, then, intended by the Department to increase the seed distribution? Many so understand it. The last Commissioner fully understood that this feature of the Department of seed distribution through the community was a gross evil, and his suggestions of relegating the tests of seeds to the various stations was for the express purpose of correcting it. Are his suggestions now to be adopted only to increase instead of lessening the evil? We trust that we may soon have more light on this point.

Through this State, and all the eastern region, the Potato crop has been greatly shortened, and the quality deteriorated by the rot (*Peronospora*). It is now claimed that the Bordeaux mixture, the same as applied to grape vines, will destroy the potato fungus. But it is probable that it is still a question whether the remedy is a practical one. The writer

entered a potato field with its owner, early last autumn, to examine it, but scarcely expecting to find any sign of rot; it was situated on a dry hillside, and the soil was new, having been broken up in the spring for the first time since it was cleared of timber, two years before. The plants appeared to be growing finely, and were of a uniform deep green color, without any signs of disease such as might have appeared in yellow or blackened foliage. The first hill that was pulled revealed rotting tubers, and it was difficult to find a perfectly sound hill in the whole field. It is evident that in seasons favoring fungus the disease is so insidious that it will not be suspected. Must the application of the mixture be applied early and often, and in every season in order to ensure safety? So it appears. If this is the case, its practical efficiency will not rank high.

Turning now to the use of the Bordeaux mixture on Grape vines, for the prevention of mildew and rot, the reports of trials the past season are not as encouraging as it was hoped they would be. The efficiency of the remedy appears to depend greatly on the earliness and frequency of its application. In some cases there has been partial success in its use, in others it has apparently had no effect. A better understanding of this proposed remedy will probably be had after another season's trial of it. The worst feature in connection with it is the tainting or imparting a coppery taste to the fruit, as shown by the report of the Delaware Experiment Station, an account of which has already been given in these pages. The only remedy found for this difficulty has been to wash the fruit in vinegar. Possibly this process might be practical for wine grapes, but for eating from the hand we think fruit thus treated would be passed by untouched. In looking at the business of fruit culture generally in this country, one cannot fail to be impressed with its immature and unsettled condition. Apparently it is also in a transition state, owing to the extension of facilities for shipping it long distances, the opening of new territory and other causes. Eventually there will be more stability; the best regions and localities for the profitable production of certain fruits will be better known, and improved methods will prevail.

JAPANESE DWARFED PLANTS.

All have heard of the queer practices of the Japanese and Chinese in dwarfing various trees and shrubs ; but few, however, have a correct knowledge of the extent to which this dwarfing process is carried. At the Paris Exposition, the past summer, in the Japanese Department, a considerable number of these dwarfed specimens were exhibited. The term, *dwarf*, does not fully express the character of these objects, for they are not only dwarfed, but so deformed as to be *monstrous*. Why any people should have devoted themselves to such a practice, or found a

pleasure in it, is as explicable as are many other deforming arts practiced upon the human body among barbarous, semi-civilized, and, perhaps, we need not exempt enlightened peoples. These plant monstrosities are interesting as indicating the great vitality of some kinds of vegetation, and showing to what unnatural conditions they can be subjected, and yet live, and live for many decades, and attain a century and more of age.

The *Revue Horticole* has figured and described a number of these plants, and some of them we here reproduce, with the essential facts and details as given in that journal :

Figure 1 represents a specimen of *Pinus densiflora* at one-eighth natural size. Accordingly, the real height of the plant must be about three feet, and the distance across some fifteen or sixteen inches. The peculiarity of this monstrosity is that its roots have been so developed that most of their lengths are above the soil and in the air, and really form a number of stems to the plant. The crown of the plant, where the real stem commences, is at the point *b*. Above this point rises the short, crooked stem surmounted with stunted, twisted and contorted branches, bearing the leaves.

Figure 2 represents another specimen of *Pinus densiflora* of the variety *albiflora*. This plant is of an extremely advanced age—far greater than its proportions indicate—it is more than a centennarian, and during many years was employed with others in the decoration of the mausoleums of the Tycoons at Yeddo. Its height is about four feet. The diameter of the trunk at the rim of the vase is nearly twenty inches. After citing the above examples one is ready to believe that this particular species presents in its organization a particular plasticity which lends itself to all caprices, and which permits the plants to become monsters of age, and of widely different forms. At the same time it may be remarked that the Conifers of the genus *Pinus* are not the only species that submit to this treatment. An example may be mentioned of *Podocarpus ovata*, exactly similar. Although very old the subject was only about sixteen inches high; its condition of health was excellent.

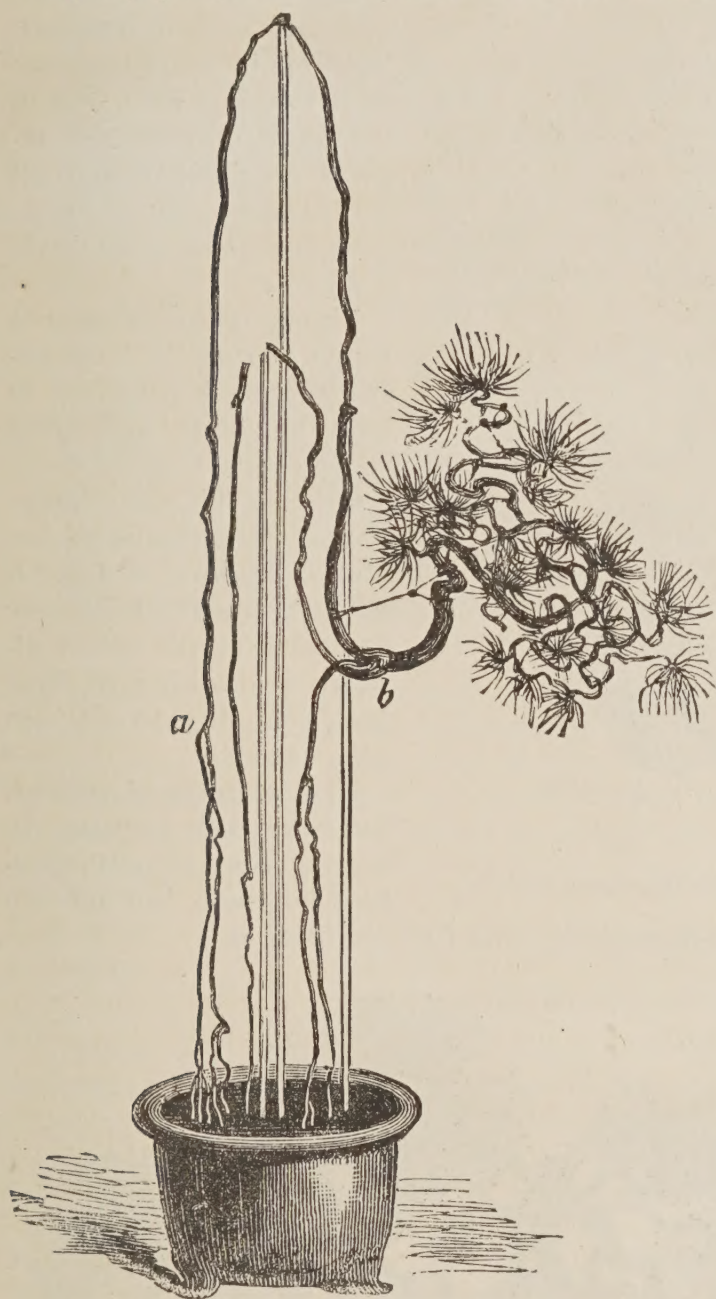


FIG. 1.—PINUS DENSIFLORA.

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Figure 3 represents a *Rhynchospermum Japonicum*, belonging to the natural order Apocynaceæ. Planted in a hollow section of a stem of tree fern, the subject is very vigorous, notwithstanding the numerous mutilations to which it has been subjected in order to make it dwarf and monstrous.



FIG. 2.—PINUS DENSIFLORA ALBIFLORA—150 YEARS OLD.

Nothing is more curious than these contortions of the stem, of size and aspects so diverse, and all surmounted by a considerable number of leafy branches.

Figure 4 represents a *Pinus parviflora*, and according to its label it is one hundred and fifty years old.

Other subjects mentioned are *Retinospora obtusa*, *Taxus*, *Abies bifida*, *Bambusa*, *Juniperus Japonica*, *Retinospora pisifera*, and a kind of *Azalea* belonging to the *Indica* group.

The Japanese also dwarf the fruit trees, but they do not try to make monstrosities of them, but merely

to dwarf them, in order to enable them to gather the fruit more easily.

The following statements are given as a summary of the methods employed in dwarfing plants:

1st. The stems and the branches are twisted artificially in every direction, either in a waving or serpentine form, or coiled as a helix, and this has the effect of greatly diminishing their apparent length.

2d. The branches are pinched very frequently, and the stems are often cut down, whereby they become enlarged in such a manner that the trunk forms a thick stump whence grow branches more or less slender.



FIG. 3.—RHYNCHOSPERMUM JAPONICUM.

3d. The plants are deprived of the tap-root.

4th. The roots which replace the tap-root go out of the ground for a great length, and are buried in the soil only at their extremities, in such a manner that the trunk is supported by numerous feet or legs.



FIG. 4.—PINUS PARVIFLORA—150 YEARS OLD.

is cut down to an inferior branch, and this is subjected to the treatment already described. It is almost certain that this operation has been repeated many times on those trees which have arrived at a century of existence.

To repeat, this method of culture consists in the suppression of the tap-root, the scanty nourishment allowed by denuding the roots, the twisting of the branches and the frequent pruning or cutting down of the stem.

SHIRLEY POPPIES.

Those of our readers who have not yet cultivated this strain of Poppies may be surprised at their beauty as seen in the colored plate of this number, and those who have seen the flowers will recognize the truthfulness with which they are here portrayed. Our readers have already been apprised of the origin of this variety, but for our new readers it may be said that it is yet new, and has been but little disseminated. The variety is due to the care and skill of an English clergyman, Rev W. WILKS, who commenced some ten years since with a single bloom with a narrow white edge, which he found in a patch of field Poppies. By sowing seeds from this flower the next year he had flowers with broader white edges, and this white margin continued to increase from year to year. After a time the patient propagator decided that the flowers would be handsomer if there were no black spot on the petals, as most flowers showed. He then commenced to select a few with broad, white margins and without black spots, and to sow seeds from them. He carefully weeded out all the plants having flowers with black spots, and saved only those which were free from them and had the broadest white margins. The strain is now very well fixed, and the seeds produce but few plants that show any black. There can be no brighter show in the garden than a mass of these Poppies. We all know how easily Poppies can be raised by sowing the seed thin in good garden soil where the plants are to remain, and this variety is not different in its cultural requirements from other annual varieties. If plants should come too thick, thin them out, and pull out any plant that shows a flower with a dark spot.

ONE OF THE ANTILLES.

None of the other West India islands has anything like the historic interest that is associated with that of San Domingo, or, as it was formerly called, Hispaniola, and at a later day, Hayti. Spain sent her first colonies here, and in a very few years after COLUMBUS' first voyage this island had many settlements and many thousand Spanish inhabitants. Here rest the bones of CHRISTOPHER and his son, DIEGO; here are churches, built in the discoverer's day, and they are still to be seen in a fair state of preservation. One, in 1494, only two years after his first voyage, one in 1507, and still another in 1515. Without doubt, each and all of these buildings have received the tall form and echoed the footsteps of the great navigator as he passed to kneel before their altars.

This island is quite mountainous, three ranges extending almost its entire length, thus giving a great variety of climate; but it is everywhere tropical, except, perhaps,



on the high grounds, where the temperature would more nearly resemble the best of our June days. Much of the island is very productive. There are exported large quantities of sugar, coffee, tobacco, cocoa or chocolate and cocoanuts, also Mahogany, *Lignum vitæ*, Logwood, etc.

There are no roads on the island, thus making the marketing of these products most laborious. Everything is brought to the seaboard on the backs of mules or horses; even the Mahogany, except what is secured near the coast, is cut into short lengths and carried in this way over the rough mountain paths for, perhaps, fifty or sixty miles.

Some of the valleys are marvelously beautiful, particularly that of the Vega Real, (Royal Valley,) so named by COLUMBUS. It lies between the Cebia and the Monta Christi range of mountains, and is watered by numerous rivers, the larger being the Una and Yaque, the latter being the famous Gold River of COLUMBUS, as viewed from the little village of Santa Cerro, near the old city of Labega, which is built on a spur of one of the mountains. I cannot conceive of anything finer; the scattered and picturesque huts and cottages of the natives surrounded by small clearings, a

little patch of Plantains and Tobacco, possibly some Coffee and Cacao, and beyond a forest of Palms.

Traveling through the country numberless large trees are continuously seen. Many with immense seed pods from one to three feet long hanging pendant from their branches, and quite frequently the great Ceiba, with its buttressed trunk and branches, kissing the sky. In many places all these are loaded with Orchids, one often seeing in a crotch, perhaps fifty or one hundred feet above, one as large and much resembling at that distance a great Century Plant. Again are the trees festooned with vines, and quite prominent the long rope-like *lianes*, presenting an almost impenetrable mass of foliage. Again is the forest filled with Cacti of every description, some that have formed wooded trunks and are veritable trees twenty



Royal Palm and Tenuat House, Ranch Repagnole, W. I.

to thirty feet high. Words fail to describe the beauties of such a forest when filled with its wealth of unique and variedly colored bloom.

Those who have not seen a native forest of the Royal Palm, have, I hope, the realization of such a sight in store for them. One cannot imagine its beauty from any verbal description, or from seeing a few dwarf specimens in our greenhouses. The Palm has no branches, but simply a tuft of leaves on its top, but such leaves, twelve, even twenty, feet long, and so graceful as they are gently wafted by the breeze. Its trunk is smooth and straight, and one would almost be led to assert that it had been made to order in a turning lathe. It stands from thirty to sixty feet high, of very nearly uniform size top and bottom, but enlarged in the center. A vista through such a forest was a continued suggestion of an immense cathedral with thousands of columns and the comparative insignificance of man. This tree is a most valuable one to the natives. It produces a large amount of nuts or seed, which grow from the base of the leaves in great bunches, two or three of which would make a dray load. This seed forms a large proportion of the food for the immense herds of swine, which constitute a favorite dish of the Dominicans. When cut down the whole of the tree is used in their primitive way. Perhaps all are not aware that the Palm, unlike other trees, grows from its center, like a Lily or the various grasses.

The terminal bud is a white, solid, crisp mass, about four inches in diameter and two feet long; it is used much in the same manner as we do Cabbage, but in taste it does not at all resemble that vegetable—it is very nutty and for a salad has few equals. The rind or shell of the trunk makes excellent and very durable clapboards for their houses, while the bark on the newer growth at the top forms the roof, and the pithy part, which forms the inside of the tree, is used for firewood.

The Cocoanut, is, of course, familiar to all, but few are aware that it grows on one of the handsomest of the Palm family. Unlike the Royal Palm, its trunk is almost always crooked, having a way of leaning this way or that. The nuts are produced in large clusters of ten or fifteen from the base of the leaves, and after it has reached the age of six or eight years the tree becomes ever-bearing, having blossoms and ripe fruit continuously the year round, an average yearly yield being three or four hundred nuts to a tree. These nuts are consumed quite largely by the natives while



Palm Bark Cottage, Ranch 10, Honolulu, W. I.

in a green state, before the meat has formed. At this stage the shell is quite full of milk, which is considered a very healthful drink by the islanders, and is considered very nutritious for invalids. At this time, by using a spoon and slightly scraping the inside of the shell, one is rewarded with a rich substance much resembling cream.

The sprouting and first year of a Cocoanut tree is most interesting, and the words of Canon KINGSLEY very nicely describe it:

"If you search among the cream layer at the larger end of the nut, you will find gradually separating itself from the mass a little white lump, like the stalk of a very young Mushroom. That is the ovule. In that lies the life, the 'forma formative' of the future tree. How that life works, according to its kind, who can tell? What it does is this: It is locked up inside a hard, woody shell, and outside that shell are several inches of tough, tangled fiber. How can it get out, as soft and seemingly helpless as a baby's finger? All know that there are three eyes in the monkey's face, as the children call it, at the butt end of the nut. Two of these eyes are blind and filled up with hard wood. As the nut lies upon the sand, in shade, and rain, and heat, that baby's finger begins boring its way, with unerring aim, out of the weakest eye. Soft itself, yet with immense wedging power, from the gradual accretion of

tiny cells, it pierces the wood and then rends, right and left, the tough, fibrous coat. The baby's finger protrudes at last and curves upward toward the light, to commence the campaign of life ; but it has, meanwhile, established, like a good strategist, a safe base of operations in its rear from which it intends to draw supplies. Into the albuminous cream which lines the shell, and into the cavity where the milk once was, it throws out white, fibrous vessels which eat up the albumen for it, and



Coconut Grove, Rancho Españole, W. I.

at last line the whole inside of the shell with a white pith. The albumen gives it food wherewith to grow upward and downward. White threads of root have struck down into the sand, and so the nut lies chained to the ground by a bridge-like cord, which drains its albumen through the monkey's eye into the young plant. After a few months the draining is complete, and the little plant having got all it can out of its poor wet nurse, casts her ungratefully off to wither on the sand."

A curious thing to note of the Cocoa tree is, that although it will grow on the mountain top, it thrives much the best on the sea shore, where its roots can reach the salt water.

C. C. GOODALE.

A BEGINNER IN FRUIT-GROWING.

NUMBER 3.

In my last letter I gave some general instructions about laying out garden-farms with reference to convenience in gathering crops and economy in cultivation. Having fixed upon the best way of planting the farm, the next thing will be to decide upon the kinds of fruit to grow.

This decision must depend largely upon the nature of the soil and location.

As a rule, bottom lands, muck swamps and all low-lying, flat lands are unsuited for fruit, and should be let severely alone if fruit-growing is to be engaged in. Such lands are especially adapted to vegetables, and more than one successful market gardener has come to grief by planting his rich, low-lying garden to fruit, thinking to get rich in an easier and

less laborious way. Fruit of all kinds is the outgrowth of maturity, and soils that force a rank, succulent growth up to the close of the autumn, and leave no season for maturity of wood and buds, are unsuited for its production.

Again, some kinds of fruit will succeed in some localities and not in others. My friend, Mr. NICHOLAS OHMER, the introducer of the Gregg Raspberry, claims never to have had any serious trouble with its winter-killing, and I believe his statement; yet I can point to a score of plantations in Northern Ohio where it winter-kills at least one year in four. Mr. O.'s farm is on a high limestone ridge or hill, close to the city of Dayton. The soil a gravelly loam, self-draining, and apparently containing just the constituents needed for successful Raspberry growing. Whether the location in the southeastern edge of a city of seventy thousand inhabitants makes it less liable to severe winter-killing than a place remote from the city, I cannot say; but it seems to me that the smoke and warmth of such a city, interposed between the cold western winds and a fruit farm must have a considerable effect in ameliorating their severity. In Northern Ohio, pear orchards are very often rendered barren for the year by a cold northeast storm at the blooming period, and I am inclined to believe that a pear orchard in the western edge of a considerable town would escape, when a fully exposed one to the east of the same town would succumb to an easterly storm.

It is common for beginners in fruit culture to think that all kinds of fruit may easily be grown on the same farm, with the same appliances and management. Nothing can be farther from the real truth. There are, at least, three grand divisions into which fruit culture can be separated with wisdom and profit, viz., berries, tree fruits and grapes. The first, berries, which embraces Strawberries, Raspberries, Blackberries, Currants and Gooseberries, can be easily cultivated and marketed with one horse, only the plowing requiring two horses, and this can be hired. An acre of Strawberries, two each in Raspberries and Blackberries, and an acre in Currants and Gooseberries, only forty square rods of the latter, seven acres in all, can be marketed and tended by a man with a good hired

hand and one horse, but the picking will require several hands, and, in the case of Strawberries, a foreman.

The berries, coming in succession, not only take all the summer months, but require the same kind of packages and generally go to the same dealers and consumers. But some one asks, why can not I market after the berries are gone, Grapes and Plums and Peaches and Pears and Apples? As far as the season is concerned, it can be done, as Blackberries are gone before the bulk of the Plums and Peaches come to maturity, and sometime before Grapes must be picked, but in the case of at least two of these fruits, Grapes and Peaches, there are thousands of acres adapted to berries where there is one on which these can be profitably grown, and in the special grape and peach localities it does not pay to grow berries. Pears, Plums and Apples are more general in their adaptability, but if grown in large quantities require large wagons, two horse teams, and packages entirely different from the small fruits. For these reasons, I would separate fruit-growing as above divided; but if the land lies high and seems adapted to tree fruits, four or five hundred trees might be managed in connection with the berry patches, planting and cultivating the berries with them for four or five years.

Having decided what line of fruit-growing to embark in, the question of buying the plants or trees becomes of importance and cannot be too carefully considered, and the winter season is a good time to write for catalogues and make up lists for purchasing. As a rule, it is best to buy near home, but there are exceptions.

I was greatly amused, last spring, in reading the experience of an Ohio man who suddenly resolved to become a berry grower, and planted five acres of Strawberries. He was obliged to buy thirty thousand plants, and gave his order to a local grower of plants without visiting his nursery or ascertaining whether the man really had them. The nurseryman did not have them, but sent to New Jersey, where they could be bought cheap, and got the plants. They came late, and the planter was unable to properly care for so many, they came in poor condition, and the result was a scattering,

half dead plantation that never amounted to as much as a good half acre would have done. Had this man got a few hundred plants of some reliable grower of established reputation and grown his own plants, he could, the next spring, have dug as he planted, and only planted what he could have got in in good condition. I recently talked with a Strawberry planter who ships a good many plants, and he said to me, "You would be surprised if you could see some of the orders and inquiries I get; men who have never raised a Strawberry in their lives write me, asking what I could sell them ten thousand or twenty thousand plants for, and one man, a farmer, wrote, asking what it would cost to get Strawberry plants for forty acres. He generally planted forty acres in Corn, but he thought of planting Strawberries instead, as somebody had told him that Straw-

berries could be grown as easily as Corn, and would easily produce one hundred dollars per acre clear."

One spring I had a visit from a farmer who wanted to see my raspberry plantation. After we had looked at it and talked some time, he told me that he had no idea that Raspberries took so much work. He thought of putting the greater part of a forty acre farm into Raspberries, and yet I found that he did not know that there were some varieties that only increased by rooting of the tips, while others spread by suckers.

A person who is just embarking in fruit-growing cannot be too cautious in buying his outfit and plants, and it is better to begin small, especially if capital is limited. Much information can be gathered by reading horticultural publications and attendance at horticultural gatherings.

L. B. PIERCE.

GERANIUMS.

Geraniums, Geraniums everywhere, and everybody has them that has flowers. Dear Geraniums, how you are petted, and how you are abused, some are fed to death, others are starved, some hang limp and are dying for a drink, while others are almost swimming. Some are shaded till they spindle up, while others are scorched till there is no beauty to commend them, and yet they live, and are the most popular house plants we have.

There are different ways of treatment, and each that advocates a method thinks his the best—I mean treating for winter bloom. For summer blooming they need no special treatment, all that is necessary is to plant in the open ground after we have settled weather and they will grow and bloom in almost any situation. A person would be surprised at the number of trusses a thrifty Geranium will produce if he should count them through the season.

My experience is that old plants that have been in the pots all summer give the most bloom in winter. Of course, they must be repotted in the fall. I have also found that plants that have been planted in the open ground a short time make remarkably fine plants. If Geraniums that were put out in April or the

beginning of May are taken up in June or July, just before they begin to bloom freely, it will be found that they have formed many branches, and after being potted will put out many buds and be in fine condition for fall exhibition. Some bushy, scraggly plants, when put out, grow into beautiful specimens.

Geraniums, also, that are put out in July or August, and then taken up after they have begun to branch make nice plants for winter blooming. Geraniums in the house want an abundance of light, and want to be turned often to keep them stocky; but a fine aspect they give to the window if allowed to grow one way. That is, if one only cares to have them nice toward the outside, especially the fancy-leaved ones. Some claim they bloom more freely if allowed to grow one way. There are some that confine themselves only to single flowering varieties on account of their free-blooming propensities; but there is no use in this, for there are many double and semi-doubles just as free, and then the double ones do not drop their petals so soon, therefore make a show much longer.

I will give a list of my favorites and their respective merits as house or bedding plants:

Gloire de France, a grand Geranium, a

fine bedder, and indescribably beautiful in the house in the spring.

Grand Chancellor Faidherbe, one of the finest; a rich, dark color, an excellent bedder, and greatly admired.

Golden Dawn, double, nearest approach to yellow; a good one to bed, also pretty in the greenhouse in spring.

Jules Ferry, beautiful single red, fine for indoors and out, very attractive.

B. K. Bliss, a grand old variety, double, scarlet; good for the garden and window, individual florets fine.

Re Umberto, large, double, orange scarlet, new and fine; a grand addition to Geraniums for in and out.

Harriet Thorpe. This is a beauty for indoors, such handsome trusses and so delicately shaded—a good double.

Beatrice. This is a gem among the light single ones, pure white but the petals are shaded pink toward the center; very attractive indoors, for which it is best.

Francis of Arago. This is a new sort whose florets are large, color rather rosy salmon; a very attractive variety, best indoors, single.

J. Wideman. This is about the most free bloomer I know of; color salmon; does well both indoors and out; double.

Charles Darwin. A very pretty dwarf-growing plant with dark red, double flowers, with an orange-scarlet eye, very fine pot plant, distinct.

Dr. L. C. Lafour. This most beautiful light single Geranium is remarkably handsome, fine house plant. If I could have but one light single variety, I should select this one.

Alba Perfecta. A good double, white, best indoors, but is superseded by White Swan, which is good.

Sarah Bernhardt. A fine single, white, good for house, as is also Mad. Doublat.

Divine Comedie. This is another indescribably beautiful variety, best indoors.

La France. A fine single, pink, good bedder and pot plant.

Marquis d' Aigle, a double; Master Christine, good for the garden; Perle Von Boughad, a fine bright pink, single, good for indoors and out.

There are many more, but this article is about long enough, so I will only say that one can not go amiss by getting Mrs. Cope, Ferdinand Kaffer, Bac-Mink, Asa Gray, Jewel, William Cullen Bryant, Jessie Green, General Grant, Queen of the Fairies, Mary Hill and Sam Sloan.

J. BARTING DIEMER.

FRUIT-GROWING AT THE WEST.

One of the drawbacks of Wisconsin and Minnesota is the failure of such fruits as the Apple, Cherry and Plum to adapt themselves to our climate. I do not understand enough about horticulture to feel justified in giving a reason for this failure, and I think our leading fruit-growers fail to agree as to the causes of failure. But one thing is certain, but few varieties of Apples live long after coming into bearing. Young trees do well. They make a strong and healthy growth. They seldom fail to keep their health and vigor until they become large enough to bear. They generally bear one, sometimes two or three, good crops. Then you notice that some of the branches begin to look unhealthy. The leaves turn yellow early in the season. The next spring you may find half the tree dead. In a year or two you have to dig it up and plant a new one in its place. On my father's farm were several Russets that had as vigor-

ous a look as I ever knew Apple trees to have anywhere. This vigor lasted until they had become large enough to bear several bushels of Apples. In two years from that time not a tree was alive. Cherries behaved in the same way. Not nursery grown stock alone, but trees which were grown from seed planted in the orchard where they were set. It would seem from this that bearing fruit exhausts the tree which, up to that period of its existence, is strong and healthy. May we not infer from this that the soil lacks something necessary to the sustenance of a bearing, if not a growing, tree? It certainly looks as if such an inference was a correct one.

This failure is not among the more delicate varieties alone. It is universal, so far as my observation goes, though it is a fact that, in some localities trees live much longer than in others. This I attribute to the soil and the positions in

which they are planted, but the extinction of the orchard is only a matter of time. I know of orchards which bore large crops of Apples ten years ago, where not one tree is alive to-day.

The one Apple which seems best adapted to our climate and soil is the Duchess of Oldenburg. This often bears many successive crops of fine fruit, but ultimately it goes the way of other kinds.

Many plant Crabs, relying upon them wholly for fruit. They certainly are hardy and will yield enormously, and have the merit of coming quickly into bearing, but I see that the most vigorous trees seem to be attacked with a sort of twig-blight after a few years, and soon the whole tree is in a bad condition. Plums have been grown as far north as

Green Bay, but soon they fail as other fruits do. But it must not be inferred from what I have said, that we do not raise a great deal of fruit. Our western farmers, as a class, are very plucky and persevering and dislike to give up beaten, and when a tree fails they set another in its place. This is done yearly, and in this way the orchard is kept up. It seems to be the only way in which this can be done. Of course, the expense and trouble is considerable, but even a small crop of fruit amply repays the outlay and labor, and if two or three medium crops can be secured before the tree dies, so much the better. A small orchard will yield a good many bushels of fruit each season, if properly cared for, and successive planting will keep up this supply.

EBEN E. REXFORD.

THE BROKEN HARP.

The harp lieth broken, untuneful and still,
Which only the touch of the summer could thrill.
The harp that re-echoed the music that floats
In roundelays, rippled by song-birds' soft throats,
Or wakened to warble a lullaby blest,
When brooks went to slumber upon the earth's breast.

Which breathed with the blossoms but balm and
balm,
When the earth lay, at eve, wrapped in wonderful
calm,
Or whispered when breezes swept up to the sky,
Or silver-skeined showers slipped, like benisons, by,
That harp wakes no more. Oh, the loss that it
brings!
For winter has laid a harsh hand on its strings.

Ah, sweet harp of summer, how joyous your strains!
How tenderly true were your lightest refrains;
How gleefully glad were your matins, when morn
Awoke birds to carol in Linden and Thorn!
And when tempests thundered o'er forest and lea,
How grand were your anthems, how deep and how
free.

Ah! far more you told to the listening heart
Than notes less divine than your own could impart;
But there came a day when a wind from the west
Was like a chill hand on your vibrant strings prest;
A shiver and sigh—'tis the "rift of the lute,"
And soon, sadly soon, your loved music is mute.

Yet, sweet harp of summer, a fond fancy clings,
Though naught I see now but your poor, shattered
strings,
When memories blessed troop up from the past,
And winter's snow-wreath from your bright brow is
cast;
When spring softly tries "if your strings be in tune"
With all the sweet melodies wafted by June,

You will wake up some morn with a note so com-
plete,
The whole world will worship again at your feet;
For though, like my heart, hushed and frozen so
long,
Thou yet are pulsating and tender and strong.
Though now lying low in mute sorrow and pain,
The earth will grow glad with thy music again.

DART FAIRTHORNE.



FOREIGN NOTES.

RESTORING SHRUBS.

The beneficial effects from mulchings of manure and dressings of artificial manurial agents is well known; equally beneficial, though perhaps not so well known, are dressings of soil when applied to ground which has been exhausted by the roots of shrubs or trees. The limits may not be struck at these, as we have proved how wonderfully recuperative to fruit trees, flowers and vegetables is the addition of a few inches of soil to the ground occupied. But shrubs are so generally starved that it may be well to limit these remarks to them. The necessity exists for fresh food most generally in cases where trees grow among and overtop shrubs, and where leaves are carted off before decaying. It does not matter about the quality of the soil used, so long as there is a sufficient thickness spread on; four inches in thickness may be taken as the least quantity to prove of any permanent good. Where the shrubs are thick the whole ground may require covering, but it must be noted that a good thickness of soil spread thickly under each shrub is much better than a less thickness spread over the entire surface of the ground. The rationale of this treatment does not depend entirely on the fact that the plant is in possession of a supply of food. I do not think that an increased food supply is even the main good, but rather we must look to the vitality imparted to the whole plant through the increase of young roots, and the quality of these roots as compared with the quality and quantity of these previous to the addition of soil. I have seen wonderful results follow in the next season's growth through the liberal application of fresh material immediately over the roots of shrubs. Those seemingly dying have been brought back to health.

Another means of putting fresh vitality into shrubs in cases where the soil is strong is simply to dig a circular trench at sufficient distance from the bole of the plant not to stop growth; the width of the trench not to be less than twelve inches, but six inches wider is better. A suffi-

cient opening to work with freedom and dispatch is formed at the side, and the soil simply turned over and broken up, and that to a depth of fifteen inches. When the shrub is circled the soil thrown out is put back and the work completed. If done now or early in spring the plant will show the first season the great benefit it has received from the operation. The reason is much the same as in the case of those dressed with fresh soil in sufficient quantity—viz., the emission of numbers of strong roots in a medium more suited to a healthy growth than hard soil unbroken. Another method of throwing fresh vigor into shrubs is the drastic one of cutting them in more or less severely, according to circumstances; but this, of course, has the objection of altogether altering the appearance of their surroundings when carried to extreme lengths. However, by the method of taking a few feet off particular plants at intervals of every two years it is possible to help the health of plants very much, and in any case the digging of a trench round them, or the addition of fresh soil to the surface, will not be lost labor.

B., in *Journal of Horticulture*.

ADIANTUMS.

The Maidenhair Fern is undoubtedly the most popular of all Ferns, and although many other species are now grown extensively for decoration, none find such general favor as *Adiantum cuneatum*. There are, however, several other species which are more effective for some purposes, and no other family of Ferns is so rich in beautiful and distinct kinds. We have also many garden varieties added to this genus which are valuable acquisitions. It is, perhaps, owing to the old favorite having to be grown under different conditions to produce that beautiful pale shade of green that has brought about a different system of culture. This has led to other species being treated in a similar manner, and thereby rendering them serviceable, where under the old system they were useless. The old system of growing Ferns in a close moist at-

mosphere under heavy shading, and potting the plants almost exclusively in sandy peat, is now so thoroughly exploded that I need not dwell on that matter. Yet even now the necessity of giving Ferns plenty of light and a little fresh air is not fully recognized, except where the plants are grown for market.

Most of the *Adiantums* succeed best when potted in a compost of at least one-half loam. A little well rotted manure is also beneficial, and leaf-mold is valuable. Peat may be used only moderately, and if the loam is good and contains plenty of fiber, it is not necessary. To grow young plants on successfully they must be potted before they get pot-bound or at all stunted. In potting, the crowns of the plants should be kept well down on the surface of the soil, but not buried too deeply. Of course, the different species require different temperatures, but almost all the *Adiantums* will thrive better if grown in a light open position with only slight shading in bright sunny weather. Plants which have been grown under heavy shading will soon shrivel up if exposed, but start the plants and grow them on throughout, and it is surprising how much sun they will stand without suffering. Many of the *Adiantums* are remarkable for the bright tints in the young fronds, and it is only by exposure to the sunlight that this bright coloring is fully developed. It is necessary to attend carefully to watering, as the plants will suffer considerably if allowed to get too dry. On the other hand, they should not be kept too moist. The *Adiantums* may all be increased by division; seedlings make the best plants, however, and this is the most desirable method of increasing the stock of all those from which spores can be obtained.

F. H., in *The Garden*.

ROSE DUCHESSE DE DINO.

A new variety of Hybrid Perpetual Rose, *Duchesse de Dino*, was sent out the past autumn by the originator, M. LEVEQUE, of France. A colored plate of this variety has been issued by the *Revue Horticole*. It is one of those full, rich, dark varieties that are always admired. The plant is said to be vigorous, and a very free bloomer. It is said to have one quality which is very valuable, that is, it will bear the great and exceptional heat

which we sometimes have for a number of days in summer, and which causes many varieties of Roses to drop their petals almost as soon as expanded; such weather is said not to affect this variety.

COMMERCIAL FERTILIZERS.

Quick-acting, nitrogenous manures, such as nitrate of soda and sulphate of ammonia (the former for light and dry, the latter for heavy and cold soils), should be applied early in the season to growing crops, never late in the autumn; phosphatic and potassic manures earlier still, before growth commences, and before dry weather sets in, or they cannot be appropriated, because not dissolved, by the crops they are intended to support. Chemical manures have often been condemned as worthless when the fault rested with the users in simply applying at the wrong time what was really good for attaining the object in view.

From abstract of paper by J. WRIGHT, in *Gardeners' Chronicle*.

A GREENHOUSE CLIMBER.

A writer in the *Gardeners' Chronicle* has the following to say of *Aristolochia ridicula*: Not long ago, I saw the above mentioned plant at the Royal Winter Gardens, Edinburgh, in flower. It well earns the name, *ridicula*, for when seen at a distance it looks like a flutter-mouse, but close at hand it is one of the most interesting and beautiful of *Aristolochias*. The plant grows best where it can obtain the greatest amount of light and sun possible, therefore, a place near the roof is suitable. Cuttings strike readily in a good bottom heat.

LONG GERMINATING SEEDS.

One difficulty that is often experienced in germinating seeds that require a long time to sprout is the growth of moss, and perhaps other low cryptogams, which frequently cover the surface of the soil, thus obstructing and preventing the growth of the desired plants. This is found especially to be the case in the germination of Fern spores. The *Revue Horticole* advises that the surface of the soil employed for such purpose be covered with a layer of brick dust or powdered brick. On this surface sow the seed or spores, and cover with a pane of glass.

PLEASANT GOSSIP.

A BOOK ON WILD FLOWERS.

The following remarks by G. S., in the *Rural New-Yorker*, a few months since, meet my approbation so well that I wish to bring them to the attention of the readers of the MAGAZINE, followed by a few thoughts of my own on the subject:

"There is, perhaps, no place where the semi-aquatic wild flowers grow to greater perfection and beauty than in the low plains on the east end of Long Island. As a matter of course, the numerous varieties of Goldenrod, Solidago, predominate, and this common, but not the less beautiful because it is common, flower forms an appropriate and gilded frame for the more brilliant and rarer flowers of the meadows. I have in mind a low, marshy place—evidently an old pond bed—almost entirely filled with the magnificent Cardinal Flower—*Lobelia cardinalis*. It forms a circle of the most brilliant red, while the surrounding meadow is yellow and white with the Goldenrod, wild Carrots, etc. While I am passionately fond of wild flowers, the pleasure is greatly marred by the difficulty and uncertainty of their identification, and in this I am not alone. A book nicely illustrated and written in a popular style upon the wild flowers of the Atlantic seaboard would have an enormous sale.

"The writings of BURROUGHS, THOREAU and others have increased the interest in the woodland and the meadow; but amateurs who have no time to study botany as a science, are so embarrassed at their ignorance as to lose very much of their pleasure. There is an opportunity for remunerative missionary work in this field, and it is to be hoped that some of our botanists will take up the subject."

Such a work would receive a hearty welcome among botanists and lovers of flowers. Without doubt, it would, as the writer says, "have an enormous sale." There is a large class of flower lovers who have neither the time or inclination to learn the meaning of the many technical terms used in the manuals, to which they must now go for information in

seeking names and descriptions of plants. But a good illustration and a short description in words as simple and easily understood as the case would allow, would enable them to identify and learn facts new to them concerning the plants examined, without having to commit to memory previously the meaning of a great many "big words," familiar to botanists, but a large portion of which are not necessary even in a very explicit description.

There is another class, too, who would be benefited by a book of this kind, a class of young people who have a love for knowledge concerning natural objects, but who are dismayed by a look into a botanical work whose pages are covered with those dreadful "big words." Supplied with a book containing a simple account of each of the most common species, and copiously illustrated with faithful illustrations—some of which should be in colors in the best style of the lithographic art—they would be charmed by the beauties of nature newly discovered each day with the aid of this agreeable floral companion, and would finally be induced by their stimulated curiosity to go on in the study of botanical science, and those words and phrases which before seemed so difficult would, because of the learner's increased interest, become divested of their seeming perplexity and grow comparatively easy.

In Europe there seems to be no lack of such good books, and there should be no lack of them here. We have, it is true, a few works on our wild flowers, but they are so expensive as to be practically beyond the reach of the poor amateur. What we want is a book suited to the popular mind and not too costly. A botanist's name becomes better known to the public through a medium of this kind than through his comparatively little read though scientific works. There are many botanists in this portion of the country (the eastern United States) entirely capable of writing just what is needed in this line. Why don't they do it?

FRANK N. TILLINGHAST, *Greenport, L. I.*

CHAUTAUQUA HORTICULTURE.

The annual meeting of the Chautauqua Horticultural Society was held December 7th, at Brocton, N. Y. The subject for discussion was, the grape-grower's successes and reverses for 1889. Members of several shipping associations were present and took part in the discussion. The Chautauqua Grape-growers' Shipping Association have, this year, handled two hundred and seventy-six cars, aggregating eight hundred thousand baskets of nine pounds each. The association has four hundred members. The net prices per basket have averaged twenty-five cents to the grower. E. H. FAY, of Brocton, is the manager of this organization. Each week's shipments were "pooled," as it is called, which means that they were arranged so as to give exactly equal returns per basket to every member. Some twenty growers combined in a smaller association, handling twenty-two cars, and they realized twenty-seven cents per basket. The general tone of the meeting was full of confidence for the future prosperity of the grape industry. Portland, the leading grape town in the County, has doubled its population in ten years. The grape crop for 1889 brought \$200,000 net profit to the farmers of the town. The crop was only two-thirds that of last year, but the increased acreage brought the total beyond that very large yield. Concord is almost the only variety. As the Mississippi river boatmen say, that is the variety to "tie to." The entire value of the Concord grape crop, this year, in the nearer lake towns of Chautauqua County will reach a half million dollars.

The quality of the fruit, this year, was superior to last, and Chautauqua ConCORDS, at their best, are a fair table grape.

The grape harvest gives employment to an army of pickers and packers, chiefly women. The work is very clean, light and healthful. The wages paid are seventy-five cents per day and they board themselves, or fifty cents and board.

Wealthy men often buy land and lease it for a term of years for vineyard purposes. The rule is, for the owner of the land to furnish, vines, posts, wire, twine and one-half the baskets, and pay the taxes. The tenant does all the labor, furnishes half the baskets, picks, packs

and hauls to the depot the entire crop, and each has half. Vineyards are leased on these terms for fifteen or more years.

The reported yields were, P. M. MAN-
TON, of Pomfret, eleven acres, five thousand six hundred nine-pound baskets. C. W. BURTON, of Brocton, ten acres, twenty tons. IRA RISLEY (crop hurt by frost), five and one-half acres, four hundred and forty-eight baskets. IRA GAY, of Northville, Erie Co., Pa., reports a yield from six acres of thirty-six and one-half tons, the largest yield so far reported. The grape industry is leading to a better appearance of the entire farming country. New houses are everywhere going up, and better methods of vineyard culture pursued.

The annual report of the Secretary of the Horticultural Society concluded with mention of these points, which are related to the work and aims of the society:

1. The necessity of enthusiasm in our work for the success of our society. It is a purely voluntary organization, and derives its life from the devotion of its members to the noble science of horticulture.

2. There is no text book in existence which is up with the best methods of the vineyardists of Northern Chautauqua. The record of the experience of our growers has become a necessity. This our discussions give.

3. The co-operation and aid of the ladies, partially secured in the past, will, it is to be hoped, be more perfectly had in the future. Women own vineyards, they work in them, and they everywhere are engaged in the culture of flowers.

4. We must use, to the fullest extent, the press. For the greatest good to flow from our experiences, the results we obtain should be given to the greatest number. The success of horticultural pursuits means better farms, better houses and buildings, better roads everywhere, and a better and more refined society.

S. S. CRISSEY, Secretary.

A NEW ROSE.

A white La France Rose is announced by a French horticulturist, it being a sport from La France, and has now been cultivated for eight years. It differs from the original plant only in color, partaking of all its other qualities. One thing against it will be its long name, which is Mademoiselle Augustine Guinoisseau.

VICK'S CAPRICE ROSE.

When I wrote a brief note about this hardy striped Rose in the August number, there were two fine buds on it. I allowed them to bloom, for how could I deny myself that pleasure though the plant were weakened thereby? They were perfect Roses, and beautifully striped. When the frost came in October there was another large bud, which of course was injured. From personal observation, therefore, I can heartily commend this novelty. My plant was mailing size. I had only one bloom on the new Clematis, "Beauty of Worcester." Hope it will live through the winter and give me more blossoms next year. The Clematis is a favorite climber with me; I have had half a dozen varieties for eight years and they are perfectly hardy with a protection of evergreen boughs.

M. D. WELLCOME.

PREMIUMS AT STATE FAIRS.

H. F.'s notes on "Premiums at State Fairs" are just, and just to the point. I tried exhibiting flowers and fruit once in this State, and found that we were a mere side show. I resolved to attend hereafter to my own affairs until progress in fruits, vegetables, and possibly flowers, was held to be of importance approximating that of fat pigs and fleet horses—the latter mostly the property of sportsmen and not of farmers. The fact is, our orchards are a disgrace to the State. Nothing is so abused as fruit trees. If at the head center fruit is not estimated as a prime product, what will be the popular estimation? But we have reached a time when even Apple trees will not take care of themselves. Our fruit product is of more importance in this State than our cattle product. It needs fostering and care more than pig feeding. We should take a lesson from France.

I also believe that flower culture, as a means of human amelioration and social progress, is of a value close to that of furnishing food for our bellies. It still stands true, and probably will forever, that "man cannot live by bread alone," nor by pork and beans, either. Let it be understood that floriculture is not only a vast element in our production and commerce, but a far more important element in human culture, intellectual develop-

ment and morals. We are growing away from the days that create "horse-men" and "cow-boys," that is human adjuncts to cattle, and are passing into an age when character and culture are of most importance. A fat pig is a nice thing, but CHARLES LAMB's power to describe "Roast Pig" was a much finer thing. The best thing about the exhibits of Jerseys and Holsteins is, to me, not their pounds of milk, but their intelligence and beauty as compared with the old style farm stock.

Let us withdraw from the State Fairs until we have our relative rank as promoters of the "true, beautiful and good."

E. P. POWELL, *Clinton, N. Y.*

A LETTER FROM NICE, FRANCE.

A letter from a friend received last month, dated November 24th, contains some interesting statements, and from it the following extracts are given:

Perhaps it will be a gratification to many to know that agriculture, horticulture, floriculture, and all the "cultures" that the readers of VICK'S MAGAZINE are interested in, figured very prominently at the Exposition. The French government paying particular attention to that important part of the Exposition, I passed through buildings after buildings filled with all kinds of agricultural products.

There was one thing that interested me enough to make me stop and look at it. It may not be new to your readers, and may not be of any importance, but still I must tell you what it was. I was walking through the department of viticulture rather hurriedly when my attention was called to a vine that had a cork tied to it by means of a wire. I stopped to look at it and it was a simple device to hold, or protect, a graft. It is intended to take the place of the usual bandage and grafting wax in all grafting operations performed on vines or small bushes, or trees. It consists merely of an ordinary cork, such as would be used for a wine bottle, and a piece of flexible wire. The graft being ready, take a cork and cut it lengthwise into two halves, then place a piece of the cork against the graft and the other piece on the opposite side of the branch or vine and tie firmly with the wire. As you tighten the wire the vine will become imbedded in the cork and allow it to close

completely and look almost as though it had not been cut.

I wish you could have seen the beautiful beds of Chrysanthemums which I saw in the Champs Elysées, and also at the Exposition grounds. Every variety, almost, was represented, and such profusion! I don't think that that flower is appreciated by our people as it deserves to be. Here it is a great favorite; you see it everywhere—in the public gardens, in stores and shops, flower-stands and on the dinner table. A very pretty table ornament that I saw in a house where I was invited to take dinner was made of Delf ware. It was about three feet high. The top contained a beautiful bouquet of Chrysanthemums, many of them drooping gracefully over the vase, and the base, which looked like three big shells stuck together and resting evenly on the table, contained grapes of different kinds. I think that Chrysanthemums are seen to best advantage when massed, and when they are arranged with some regards to their color, size and height very pretty effects are obtained. Talking about grapes, I must say that I was a little bit disappointed with the grapes of this country. To one used to the spicy American grapes the grapes of this country taste almost flat at first. But they are delicate, and after a while you get reconciled to their mildness. The Chasselas de Fontainbleau is a beautiful white grape, about the size of the Diamond, not quite so large, perhaps, and almost as transparent. I saw a very large black grape which I was told was the Franc Comtois. It is very rich, sweet, with a melting pulp and a very thin skin. The thin skin seems to be peculiar to all French grapes. I have paid fifty cents a pound for the Chasselas and the Franc Comtois, and forty cents a pound for inferior grapes, at the fruit merchant's, but the street peddlers sell their grapes as low as twelve cents a pound, and that is the cheapest I ever saw them sold (sixty centimes, twelve cents). Now that I have commenced to talk about prices I will continue. I have paid in Paris eight, ten and twelve cents apiece for apples, and fifteen cents apiece for pears. A friend of mine once paid two francs, forty cents, for an apple about two weeks ago. At such prices it seems to me that fruit-growers ought to make money very fast in this

country. A Parisian who is a great admirer of American grapes told me that he planted Catawbas from which he gets splendid crops, but the French taste is such that he has to eat them all himself. He can't sell them, or even give them away. The people of this country do not like spicy or foxy smelling grapes. If they treat the Catawba that way what a face they would make if they ever got a sniff of the Niagaras. The Muscat of Alexandria is plentiful here, and is one of the cheapest grapes. It seems to be a little more juicy here than it is with us, and a little more of a golden color, almost resembling in color the Pocklington, that is *when ripe*. I said that at first I was disappointed with the grapes of this country, but I must say that it was more on account of the scarcity of that fruit and the high price asked for it, also of the lack of varieties. I don't believe I have seen more than four varieties, possibly five. When I asked the reason why, I was informed that very few grapes will keep after they are cut from the vine; and I think it is because the skin of the French grapes is so very thin and delicate.

The Ivy is everywhere present in France, and especially in Paris, where it grows and creeps over everything—walls, fences, houses, old trees, gates, and sometimes old houses are entirely covered with it. Of course it makes everything look picturesque and home-like.

And now I am in Nice. Nice, the beautiful, the æsthetic, the gay. The rendezvous of crowned heads and uncrowned heads, of titled nobility from all countries, of millionaires and authors, and politicians. But far more interesting to me on account of its beautiful location, its marvelous climate, its beautiful and dainty villas, its elegant chateaux and grand promenades. Here vegetation is different from the rest of the country. We see beautiful Palms of different kinds, Rhododendrons, Lantanas ten or twelve feet high (in our yard), Chinese Primroses, whole beds of them; Olive groves, Orange groves, Century Plants and Cacti everywhere. And the houses of such light, delicate and dainty colors, making such beautiful contrast to the blue Mediterranean and the green foliage and ripening Oranges, and over it all abundant bright, warm sunshine. When you see Nice at a distance you would think that

all the houses are white, especially if the sun shines on them, but when you see those same houses near by you notice that they are all of the most delicate of green, or blue, or pink. Sometimes two or three colors are blended together with white, making a happy, harmonious whole, a really tasty and beautiful home, and for a background to all this the Alps. So different in coloring from American houses, painted in coarse red, or brown, or green, or yellow, or blue.

E. N. SASSEVILLE.

CYDONIA JAPONICA.

In speaking of Quinces, pages 208-9 of MAGAZINE for July, 1889, L. B. PIERCE commends the Japan Quince highly as a hedge plant whether for ornament or to constitute a fence or barrier. In so doing he fails to notice one quality well worthy of notice, but which seems not to be generally known or appreciated. We refer to its capacity as a producer of fruit. We have a screen or border, probably ten or twelve rods in length, planted ten or twelve years since, which, besides constituting an impassable barrier to both man and beast, and affording an exceedingly beautiful object in early spring, produces annually several bushels of attractive looking fruit, which, while it lacks much of the aroma of the edible Quince, and is much less edible while uncooked, we are accustomed to use freely, in small quantity, to flavor even the milder Apples when cooked, with the effect of imparting to the sauce a sprightliness and piquancy of flavor not excelled, if even equalled, by the use of the varieties commonly employed. The fruit is in season during the entire autumn, and apparently may, if not allowed to shrivel from evaporation of moisture, be kept during part, if not the whole, of winter.

T. T. LYON.

ISMENE CALATHINA.

This plant, described in the MAGAZINE for December, belongs to the Amaryllis family, and is sometimes called Sea Daffodil. It comes from Peru, and has a perianth in six parts, not five, as Mrs. LUNEY stated, and the inner "corolla" is a corona, like that of the Narcissus or Galanthus, to which it is allied.

E. S. GILBERT, *Canaseraga, N. Y.*

GARDEN NOTES.

Last spring, just as my Pæonies were fully budded, I noticed that the white one and the crimson were affected by a malady that caused the leaves to curl and shrink till the plants were not half their natural size. The pink one was not attacked. I soaked the roots with tobacco water, but it did no good. The next morning, while the dew was on, I sprinkled the foliage liberally with sulphur. The effect of this was magical, as a few hours later not a trace of the disease was visible, nor has it returned since, and the plants bloomed finely.

Moles were disfiguring the lawn and committing depredations among the bulbs. I prepared poisoned water from fly paper, adding a little sugar, and soaked corn in it for twenty-four hours. A few kernels placed here and there in their runways soon stopped their work.

A word in regard to potting plants from the open ground for winter use. From my experience, I believe they feel the removal more when the ground has been wet for some time and the plants are full of sap, than they do when taken up in a moderately dry time. Of course, if the ground is dry, the plants should be well watered a short time before being lifted.

JULIA R. BEERS, *Bucklin, Missouri.*

NOTES AND GLEANINGS.

A. W. PEARSON, of Vineland, N. J., states, in a communication to *Garden and Forest*, that the Bordeaux mixture which is used as a preventive of mildew and black rot of the grape, will also prevent the Apple leaf rust and the Quince blight. It will also prevent the leaf blight of the Pear and the blight and cracking of the fruit. He also claims that it will prevent the Tomato blight and the rot of the Potato. When the plants are about a foot high they should be sprayed every two or three weeks until the latter part of September. The formula of the Bordeaux mixture employed is six pounds of pulverized sulphate of copper (blue vitriol), dissolved in four gallons of hot water; four pounds of fresh lime dissolved in four gallons of cold water; mix the two solutions and dilute with cold water to make twenty-two gallons of liquid. The mixture used for

Tomato plants must be only half the strength of the above, or it will injure the plants.

THE McCullom Tomato, valuable as it was already known to be, has made for itself a new record. The very unfavorable past season for Tomatoes allowed but little of the crop of most varieties to mature; but this variety, which is early, matured all its fruit at once, so that its whole production was available, thus giving the growers of it an advantage over all others. Its many other good points were well known, and of themselves were sufficient to make it profitable and popular, but the past season brought into striking prominence its remarkable value in a short and unfavorable season. The Dwarf Champion Tomato has confirmed the reputation it had acquired, and it is destined to be a leading variety.

THE new variety of Sweet Corn, Livingston's Gold Coin, has disappointed eastern growers by its late ripening. In this region and eastward it has been about two weeks later than the strain of Evergreen Corn now employed. No complaint has been received about it from the west and south, but, on the other hand, reports from these sections have been sent us highly commendatory of its excellence and productiveness.

CALIFORNIA orange-growers will present a petition to Congress asking for "a duty of not less than fifty cents per box, or five dollars per thousand loose" upon all Oranges and Lemons imported into the United States from any foreign country.

THE California *Orchard and Home*, of San Francisco, is a new horticultural enterprise. A quarto sheet, published monthly.

CAPPARIS SPINOSA which produces the caper of commerce, grows luxuriantly, says the *California Fruit Grower*, in the southern counties of California. The vines which are exceedingly thrifty grow to a length of five or six feet and carry an immense crop of buds and fruit. The so-called "caper" is the bud gathered just before expanding. The pear-shaped fruit which attains the length of several inches, when

in the green state is highly prized for pickling purposes by the people of Sicily and south of France. The plant forms a dense mat of vines on the ground, and requires no culture after securing a foothold, except to keep the weeds down. There is no reason why California should not raise all the capers used in the United States.

FRUIT IN WISCONSIN.

A Wisconsin farmer, E. REYNOLDS, of Fond du Lac County, writes to the *Country Gentleman* in regard to his experience of thirty-eight years in fruit-growing in that State. Only Apples can be raised, and of these success can be had only with a few hardy varieties. Peaches, Pears, Plums and Quinces cannot survive the vigorous winters and have been abandoned. As a summary of his views he states: "It is a losing business for farmers in Wisconsin to attempt to raise any more fruit than is required for their own use. I have, after experimenting thirty-eight years, settled down on the following varieties: Early fall—two Tetofsky, six Duchess of Oldenburg; late fall and early winter—four Fameuse and six Wealthy; late winter—six Walbridge and six Northwestern Greening; thirty trees in all. This list, if properly cared for, will furnish a family of five persons with Apples from July 15th to June 1st of the next year."

TUFTED PANSIES.

The crossing of certain species of Violets with Pansies has produced a class of flowers called "Tufted Pansies." The DICKSONS AND COMPANY, of Edinburgh, Scotland, are the originators and introducers. A fine variety, called Ariel, was made the subject of a colored plate in a late issue of the *London Garden*. A handsome engraving was also given of a variety called Mrs. Gray. Ariel, it is said, "Is a good grower and free bloomer, of a close and dwarf, but spreading habit. The flowers are of a bold and fine form, and are borne erect on strong footstalks, which are about four inches in length, so that the flowers can be gathered, and, lastly, they have a delicate, but delightful scent." It is claimed that they stand the hot weather better than the ordinary Pansy.

AUTUMN REVERIES.

The leaves are dropping from the Acacia trees along the Champs Elysées and in the Bois de Boulogne, reminding us that winter will soon come in Paris, although you would never suspect its approach should you visit the flower markets, as I did, this sunny morning, and noted almost every flower under the sun, for there were even Anemones, that one would not expect to see in September, and every tropical Fern, and sensitive Maidenhair Ferns to the highest state of perfection. Marguerites and Asters, Dahlias and Chrysanthemums, choice Roses and choicer Orchids were ranged side by side.

The Madeleine Flower Market is the most celebrated of Paris. It is the resort of tourist flower lovers, and all society folks who want a sweet bouquet at a reasonable price, go to this market in preference to patronizing the many large florists in the immediate vicinity.

The flowers are not so choice, nor arranged so artistically, but it may be the greater choice of blossoms, or the independent feeling of barter and bargaining which induces one to go to a market instead of a shop. Ten francs asked for a choice bouquet means that the flower woman will accept six, perhaps five, francs, but it is the custom among the lower classes to bargain. It is a habit prevalent among the Latin races, who explain that it is not for the love of bargain, but that each purchaser knows the capacity of his purse, and its contents indicate the value of the article to him, so at the same time the seller or possessor of the desired objects puts the highest current price, determined in advance, the real and only price he will accept, which is generally less.

I recall that in marketing in Guatemala, the Spanish peasants selling produce, were amazed and disappointed when a sensitive American feeling ever induced me to pay the stated price, and I remember, too, the contemptuous remark at my departure—Stranger! American!

The Indians seated along the curb stones, with game, chickens and eggs, determined the price of their goods by the price of articles they expected to purchase ere returning to their little farms;

the current price was of no interest to them, and no persuasion could change one "*real*" from the price asked.

The Madeleine flower woman buys her flowers from the country florist, or at the general market, at four and five in the morning, and belongs to a distinctive class of Parisian women, as much so as the wash-women, who have their queen, and at "Mardi-gras" parade through the streets with chariots drawn by magnificent horses, and I cannot say that she is selected queen for her beauty, for judging from her age, she must have been long in power.

The tourist, or journalist, who expects to extract any interesting history or any "*floral esprit*" from one of these babbling, noisy, coarse creatures, will only subject himself to insult; so pay your money and take your choice of flowers at stall number one on entering, and before you have reached the center of this little market place you will find you could have done better by not purchasing so quickly, and also, if you have looked closely, that each beautiful bud can never burst open into blossom, because pierced to the very heart by a relentless wire, just as in the florists' shops.

The swinging hand hanging baskets ornament each stall, and are rarely sold, no one seems to care but for cut flowers for the passing moment. Roses please you to-day, to-morrow it may be Carnations, and the next what not. Change, change, no sameness, hence the charm of variety found here as in no other place.

Does nature demand this? Does not the sweet, subtle charm, which each flower brought in season, unselfishly teach a lesson of promise to come again, and in leaving offer its place to a flower more or less beautiful, if less redolent.

When I am thrown in contact with great men, artists, writers and journalists in their home life, no matter how small their surroundings may be, I can judge of their dispositions by the flowers around them, and in their busy, feverish life, those who have generosity of purpose and largeness of soul invariably have some floral indication of the trait. "I am walking on Roses," said a great tragedian, using a borrowed expression to

express the intensity of his joy at appreciation, but pointing to an immense bank of Roses of every hue, from deepest red to palest of blush, not forgetting all the yellow tints, I could not miss a favorite among the goodly number, all were witness to his triumph, so I could not refrain from remarking, "they do not look trodden down." "Oh, no," he replied. "In success I remember all I love, and each Rose whose tints you may have remarked as different is associated with some pleasing and, alas, a few sad memories, so I could not forget to have their association upon this gala occasion, and I did not purchase at the florist's, but at the Madeleine Market, where longingly I have passed less fortunate days, feasting my eyes upon my favorites, unable to purchase and place them near me."

There are many flower markets, and generally in the vicinity of some church, the Madeleine being the largest and of most interest.

ADA THORPE LOFTUS.

TEN TALL HERBACEOUS PLANTS.

Will you do me the favor, as a subscriber to the MAGAZINE, to give me a list of ten hardy perennial herbaceous plants, summer blooming, and not less than three feet high when grown, excluding Pnlox, Helianthus and Hollyhocks. I want some Spiræas and Hibiscus among the ten named.

F. M. H., *Baltimore, Md.*

The conditions imposed make the selection of ten good plants somewhat difficult, but the following list will be found to contain what are best for the purpose; except that one or two of them bloom in autumn, they comply with the specifications: *Anemone Japonica alba* and *rubra*; *Asclepias incarnata*; *Bocconia cordata*; *Centaurea atropurpurea*, and *macrocephala*; *Clematis erecta*; *Delphinium formosum*, and other varieties; *Eulalia Japonica zebrina*, and *variegata*; *Hemerocallis flava*; *Hibiscus grandiflorus*, white and rose colored; *Spiræa filipendula flore-pleno*; *Tricyrtis hirta*.

SMILAX TURNING YELLOW.

Will you please inform me what treatment to give Boston Smilax? I had a fine plant, and it turned yellow, this fall; it grew fine all summer.

E. V. B., *San Jose, Cal.*

The plant had completed its growth. At that stage it should be allowed to go very nearly dry for some two months, and then the bulbs can again be started into growth.

"MYSELF" AND ITS AUTHOR.

When "Myself" was issued we were in ignorance of the address of its author, Mrs. Arey; but a copy of the Poem having been sent to the Cleveland *Plaindealer*, it published a notice of it which is given below, and by which it was learned that Mrs. Arey was a resident of Cleveland, Ohio; thereupon a copy was sent there to Mrs. A.'s address, and in her absence was received by her husband, who then informed us that Mrs. A. at that time was in Rochester visiting a daughter. A copy of the Poem was then sent to Mrs. Arey at her daughter's address in this city, and it brought an acknowledgment, as also found below. We are at liberty to publish the note, and our readers will be pleased to learn so much as is here conveyed of the personality of the author of "Myself".

THE PLAIND DEALER'S NOTICE.

Away back in the "forties," when a good many Clevelanders whose heads are now thickly sprinkled with gray were trudging, arithmetics and readers under their arms, to school, a young woman of well known and highly respected family was contributing to the city newspapers occasional poems that were regularly cut out and preserved in scrap books wherever the papers circulated. They were graceful, natural, pure in tone and sentiment and full of genuine home feeling. In course of time she married, left Cleveland and became connected as editor with periodicals devoted especially to home interests, but the name of Mrs. H. E. Grannis Arey continued to be familiar with a large circle of Cleveland readers. In course of years she returned to the city of her early love and now furnishes an example of beautiful and loveable old age in her modest but refined home at the East End. Thirty-five years ago her poems were collected in a volume of Household Songs and other Poems, published in New York, the introductory poem, *Myself*, being an account of her own childhood and the fancies in which as a child she indulged. The original publication and the early connection of Mrs. Arey with Cleveland literature are recalled by the receipt of an illustrated copy of *Myself*, sent out by James Vick, the Rochester seedsman, as a premium with Vick's Illustrated Monthly Magazine. The twenty-four large pages are so many appropriate and artistic illustrations, part having the lithographed text framed in with designs. There are many admirers of Mrs. Arey's household poems who would appreciate this charming setting of the favorite verses of a third of a century ago, but they can only be obtained by subscribing for Vick's Illustrated Monthly Magazine. The drawings sympathetically illustrate Mrs. Arey's confession.

THE NOTE FROM MRS. AREY.

Please accept my thanks for the copy of "Myself," which I received from you yesterday. My husband had informed me of the copy sent to Cleveland, and I had written him to bring it with him, or forward it if he were delayed in coming east, for I had been very anxious to see it. I

find it charming—the illustrations exceedingly apt and in line with the old memories that rise to the poem. This is especially true of the cavern and the old fallen tree. This tree was a tall, deciduous one, not a Hemlock, which in falling had been caught by the branches of another tree, so that it lay at a not too rapid incline across the trout brook, and here I used to climb and find a seat among some broken boughs, where I could watch the speckled beauties darting to and fro. The little cavern was on a dry branch of the same brook, which filled when the autumn rains came and flowed over the ledge of rocks, forming the cavern, giving, when the ice came, the effect described. I should be glad to know what artist prepared the illustrations—can hardly imagine how he knew so well just how the whole thing looked. The book will be a very pleasant souvenir to myself and sons, and I thank you again very heartily for your kindness.

H. E. G. AREY.

JAMAICA EXHIBITION, 1890.

In my last letter I mentioned that we are to have an exhibition in Jamaica during the latter part of 1890, and have much pleasure now in adding that the proposal has met with far more success than was at first anticipated, Kingston alone having guaranteed something like £7,000 toward it already. Now, some two years ago, one of your lady subscribers, in Georgia, inquired of me if we had churches in Jamaica, and of what denomination? From this I feel assured that the idea of an exhibition will be, at least to my Georgia friends, most novel and interesting news. It is also possible that many other readers of the MAGAZINE may be interested.

Artists and tourists seeking the picturesque, would find no place in the world to surpass the loveliness of our up-hills and down-dales. Invalids, or others, who have not yet decided on a winter resort for 1890, in search of that greatest of all blessings—health—on the assurance they will find every luxury and accommodation that can possibly be required, may be induced to visit this fair spot in this land of springs, where the fresh flush of vegetable fragrance, with the pure atmosphere, promotes a buoyant and elastic state of mind and body with a consequent

exhilaration of spirits; and the health and strength which are gained thereby, are not among the least of its advantages.

WM. SPECK, *Kingston, Jamaica.*

GRAPES IN TEXAS.

The varieties of Grapes best suited to Texas has been a question agitated by the *Southern Horticultural Journal*. A correspondent of that paper, Mr. W. B. WRIGHT, of Palestine, Texas, states that in the last ten years he has tested twenty-three varieties, and has discarded two-thirds of them. He also says:

“Norton's Virginia and Cynthiana are the grapes for this part of Texas. They are thorough iron-clads. For ten years they have never gone back on me; wet weather or dry, hot or cold, they are there all the time to stay. This rainy, disastrous season, they have even outdone their record. Being later than the Labrusca varieties, more hardy and suitable to the country, growing in rows on the same soil side by side with the Concord and Delaware, they loomed up in marked contrast, as a rich meadow does to a sickly swamp. They were fine in flavor and rich in sugar, weighing on sacherometer from 93 to 100.”

Other correspondents confirm this good opinion of Norton's Virginia and Cynthiana, and also extend it to other varieties of the *Æstivalis* class, such as Herbermont, Lenoir or Black Spanish and Cunningham. Most of the Labrusca class are discarded, though Delaware is highly esteemed.

NO BANANA COUNTRY.

Bananas, Pineapples and Cocoanuts cannot be successfully raised in California, according to the statement of the *California Fruit-Grower*, and it further adds:

It is true that the Banana will live and occasionally produce a cluster of fruit in nearly all parts of California; but, the climate is so adverse that the plants and fruit have but a poor general resemblance to the thrifty luxury enjoyed in their natural habitat. Pineapples can be fostered into maturity in several of the southern counties; but California's cool nights and dry air is directly adverse to their profitable culture, as it is to that of the Banana.

GARDEN WORKERS AND WRITERS.

In entering, as we now do, upon another year with the *MAGAZINE*, we hope to have the continued and increased cooperation of our readers. We wish to hear directly from those who are at work in the garden, the orchard and the vineyard; to have a statement of their successes, their failures, their experience with new things and old ones, and, in fact, to make the pages of the *MAGAZINE* a medium by which a full understanding may be had of mutual interests among horticulturists of every kind, from the grower of a single pot plant to the cultivator of acres. Photographs or sketches of interesting objects, or scenes connected with the different branches of gardening are much desired, from which to prepare engravings. Our pages are always open to inquiries, and can be freely used by all. Short notes are particularly useful; we may think that others will care but little for a subject that is of deep interest to us, and thus throw off the inclination to write about it; but one may be very sure that there are plenty of readers who will appreciate what is written by a person fully interested in his subject. A free interchange of thought is full of good results.

CRANBERRIES.

Can Cranberries be cultivated, and what is the mode?
J. V. R., *Columbus, Ga.*

The Cranberry is cultivated, but it probably would not do well as far south as the locality of inquirer. Its natural range appears to be from New Jersey to Northern New England.

Muck and peaty soils are best suited to it, and these should be situated so that they can be overflowed, and again easily

drained. Considerable labor and expense is required to properly fit soil for a Cranberry plantation. A coating of sand several inches in thickness is laid over the surface of the soil before setting the plants. The plantations are flooded during the winter season, and the water protects the plants from injury by severe cold weather.

PRONUNCIATION.

Please give the right pronunciation of *Canna Ehemani*, and oblige a subscriber.

MRS. A. A. M., *Illinois.*

The specific name in this case, we suppose to be that of a person, and he would be a very venturesome linguist who would dare to pronounce so unusual a family name as this if it were unknown to him. The proper thing to do is to pronounce it as near as possible to its orthography, and with such accent as may seem most agreeable, at least until its pronunciation is known. Perhaps some of our readers may supply this information.

AERIAL ROOTS OF CEREUS.

Perhaps some one who has had experience with Cacti will tell me if the air roots on Night Blooming *Cereus* are necessary for the success of the plant, or will it blossom just as well if they are removed?

MRS. C. B.

The aerial roots of this plant when it is growing wild undoubtedly are employed to fasten or support itself upon other plants, though it is possible they may have a double function, and as well as fastening the plant to erect-growing vegetation, they may, also, to some little extent, take nourishment from the air. As these roots are a peculiar feature of the plant, we think it would be a mutilation to remove them.



OUR YOUNG PEOPLE.

FOUR BOYS, TOO MANY?

A wild rush and jar of scampering feet in the early morning, a hubbub of suppressed shouts, a rumble on the stairway as of muffled thunder, and four rollicking boys land in the lower hall with a succession of resonant thuds, and rush off to the closet that receives their nightly deposit of shoes.

In the same spacious closet is the lavatory for their morning ablutions, and, after a wordy scramble for the right shoes—which they never can remember to stand in pairs in a row—they wash and brush, and are ready to tackle papa for some favor or other as soon as he shall have come down to breakfast.

This time it is for him to furnish what Santa Claus has failed to do—a turning lathe for their workshop, one with a treadle, to be worked by “foot-power.”

“If we are to be cooped up here in town,” they say to each other, “never allowed to play on the streets, we must have tools and things as fast as we grow to them.” So, this morning, Arthur, the eldest, is going to tell his papa that he’s grown to a turning lathe.

“I can run a turning lathe as well as you can,” says Burt to Arthur. “You know I can whip you any time when I try my level best, ’cause I’ve got the muscle, you see,” and he clenches his fist against his shoulder and strikes out like a young gymnast.

“You know you can’t do any such thing when I try *my* level best,” says Arthur, tripping up his brother while speaking. Then Burt leaps to his feet, and grappling Arthur, a short struggle follows, ending in a tussel on the floor, while Carlos and Benny stand by, laughing and cheering.

Their sister Julia, coming down stairs, yawning and sleepy, hears the tumult, and rushing in, exclaims:

“I declare, if you awful boys are not fighting, this early in the morning. I’m going to call papa down, this minute.”

Knowing she will do it, they untangle themselves, and turn their attention to her.

“We never can have any fun where you are without your interfering,” says Arthur, with a very red face. “You’re always putting on fine lady airs, and getting shocked at everything we do.”

“How did you come to be awake so early, anyway, Miss Sleepy-head?” asks Burt, sneeringly.

“Awake, indeed!” she impatiently retorts. “I wonder who could sleep a wink in this house after you boys are awake. The noise you make getting down stairs is enough to make the neighbors think there is an earthquake on hand. I’m positively ashamed of you.”

“O, you’re so touchy,” retorts Arthur. “I’m glad I’m not a girl. We do try to keep still and smother everything till—till we just explode; you know we can’t help that.”

“Besides,” adds Burt, “mamma makes us leave off our shoes to save the carpet, and how can we make much noise in our stocking feet?”

“How can you, indeed! You couldn’t if you weren’t as rude as a pack of young Indians. The fact is, four boys are too many for one house.”

“That’s what I think, when they’ve got a sister like you,” snaps out Arthur, “and I’m going to run away—that’s what I’m going to do.”

“I wouldn’t start till after breakfast if I were you,” says Julia, sneeringly.

“You shut up.”

“And I wouldn’t go till the weather changes; it’s rather cold just now for sleeping in barns.”

“I tell you to shut up, you hateful thing, you.”

Mr. Medford, entering with slippers on feet just in time to hear Arthur’s last words, is shocked at their rudeness and unkindness, and, reproving him, orders him to his room, to remain until he is called. At the same time Mrs. Medford appears, and the bell summons them to the breakfast room. While serving the buckwheat cakes, the waiting-maid announces that the cook is trying to thaw

out a half frozen boy, by the range, and feeding him hot cakes.

"I must see him after breakfast," says Mrs. Medford; "it's strange he was not picked up before he reached this street."

Breakfast being over, Mr. Medford hastily buttons himself into his overcoat and hurries to the next street to catch a car, telling Burt, as he leaves, to call Arthur to breakfast. Burt, thinking only of the boy in the basement, runs to the foot of the stairs and calling to his brother to come down, hastens to join the others below.

There, with frosted fingers and frozen feet, sits a boy of Burt's size, thinly clad, his pinched features telling of past hunger, present suffering and shyness.

"Hallo!" says Burt, "how did you get in this fix?" No answer.

"O, say, you needn't mind me; I want you to talk. You didn't start out to make a regular tramp of yourself, now, did you?" Still no answer; only a suppressed moan as he draws one foot up in his hands, from the snow-water with which the cook has been trying to draw out the frost.

"Let him alone, dear," says his mother, "when his feet hurt him less he'll tell me all about himself, I'm sure. Dry his feet with this towel, and then help me wrap them up with cotton and turpentine to relieve the soreness and swelling. I really fear he's going to lose them both; see how fast they are turning dark."

With this the boy's tears began to flow, and as he wipes them on his sleeves, he says, "I'm no tramp; I'm only a run-away."

"A run-a-way is bad enough," replies Mrs. Medford. "From whom, or what, did you run away?" Again no answer.

"Is your mother living?"

"No, ma'am." Then, after a pause, "It's because I wouldn't break my promise to her, when she died, that I had to run away."

Instantly Mrs. Medford was interested. A boy's promise to a dying mother drives him from home. She must know more about it. Drawing a chair near to him, she says:

"Now tell me all about it. I am a mother; see, I have boys, too. I want to know your troubles. What was your promise?"

"I promised her for certain, sure, that

I'd never drink beer nor liquor of any kind, nor sell it, nor help anybody to sell it, and I had to run away or break my promise."

"How was that? tell me."

"I'd rather not, ma'am," and his eyes glanced toward his young listeners, including Julia, who stood, silent, near her mother.

"You needn't mind telling all of us about it," continued Mrs. Medford. "My children are sorry for a boy who got into trouble because of so excellent a promise as that to a dying mother. Now, let's hear just how it was."

"Well, then, it was this way. My pap, he keeps a saloon, and here, lately, he got a little lame with the rheumatism, and told me to stay out of school and wait on his customers, so's he needn't be on his feet so much. Then I had to tell him about my promise. He said that was all foolishness, and that I was to do his bidding. I told him I would in every thing but that. Then he got very angry, and said, 'Do you mean you are not going to wait on my customers, to help me while I'm lame?' and I answered, 'I cannot break my promise.'

"Then he came at me with a cane he was using for his lameness, and said, 'I'll thrash that nonsense out of you, mighty quick, sir,' and he beat me until I turned so sick with pain that I fell to the floor. Then he dragged me into a room by myself and left me. The next morning, before daylight, I came away. I think, pap had taken more than usual on account of his rheumatism, or he never could have been so rough with me. But it makes me hate the stuff more than ever, if it can make a man so hard on his own child."

"That's just what it can do, you poor boy," said Mrs. Medford. "See, every one here is in tears; they are so sorry for you," Then she added:

"Now, you know there are very bad, designing boys, sharp and scheming, who could manufacture such a story as yours for the sake of getting shelter and care; but I am inclined to believe what you've just told me."

"O, ma'am!" cried the boy, with wide eyes and excited voice, "every word I've told you is true. I can give you the names of people who knew my mother. Besides, I'll show you my back—its sore

and lame yet," and off came coat and vest in a twinkling, leaving the poor back almost bare, so imperfectly did his torn shirt cover it.

And what a sight met their gaze. Julia had turned away, on seeing the rapid movements of the boy, but the united exclamations of the others turned her quickly about. The back and shoulders were completely covered with greenish-purple and red blotched welts and ridges where the blood had settled along the line of the blows, and where the broken skin had let the blood ooze through it.

"You see," the boy exclaimed, in tremulous tones, "I'd be afraid of him after that, and so I had to run away. I aint used to begging, and didn't know how to get along without money, and when I reached the city, last night, I didn't know the ways that city gamins have to keep from freezing, and the weather turned colder after I went to sleep in my hiding place, and that's how I froze my feet."

"The keeping of that promise has, indeed, caused you cruel suffering," says Mrs. Medford, with brimming eyes, "but I'm sure you'll be rewarded in the end. You shall be nicely taken care of right here until you are well, and I know many noble temperance women who will be glad to help you in the future. For the present, the cook, here, who has been so kind to you, will bring a cot from the bed-room and make you comfortable, even to a change of clean underwear from Burt's wardrobe, and a doctor will soon be here to see what more you need. Now, children, come; we'll go up and see Arthur, who feels his penalty so keenly he keeps to himself."

But no Arthur is there. He has not been to breakfast. The serving-maid called him before clearing the table, but he had not answered.

"He's pouting," says Burt, and the grieved mother goes up to talk with him. But she is startled to find his room empty—more so when she discovers that his overcoat, polar-cap, fur-collar and mittens are gone. Burt suddenly gets very sober, and whispers, "He said he was going to run away." She is now thoroughly alarmed, fearing the boy has had time to get far out of the city.

So Burt is hastily dispatched to his father's office with the sorry tidings, and there learns that his father had only

looked in that morning for some papers, saying that he should return about noon. This news at home is too much, and the tension of anxiety gives way to bitter tears. Mother and boys, with arms about each other, weep together. Suddenly Burt darts off to find his sister. She had fled to her room as soon as she felt sure that Arthur had left the house. Burt finds her, crying and wringing her hands.

"Julia," says he, "you are to blame for this. You might have known better than to tell such a boy as Arthur that four boys are too much for one house."

"I know it; I know it," sobs Julia, "and when papa sent him to his room, I knew I was the one that should be punished."

"Well, I'm glad you feel it; I was afraid you didn't. You always act as if you thought us boys a great nuisance, 'cause we can't be as finnicked and spooney as girls."

"But I don't think so," sobs Julia, "and I'd give the whole world, if I had it, just to see Arthur now, and tell him I love him."

"Good for you. Papa'll find him somehow, of course, and then we'll be a jolly lot once more." Then he left her, saying to himself, "What a queer morning—one run-a-way come and another one gone."

In the meanwhile, Mr. Medford, having an early business engagement with the railway Superintendent, arrived at the station just in time to see Arthur—yes, it was surely Arthur—enter a car on a train just moving off. Quick as thought, he springs upon the same train, and when it is well under way, leisurely saunters back into the car where his son is seated.

"Hello, Arthur, where are *you* going, this morning?" says his father, seating himself beside him.

But Arthur is too dumb-founded to speak. His father kindly repeats the question, and finally Arthur says, "Just any where to get away from home."

"*Don't know where you're going to!*" It strikes me that's bad management—very unbusiness-like. Now, if I were a boy, planning to leave my home, I'd want to make sure of a better place to go before starting—a place where the people would be sure to want me, especially the women-folks, a place where I'd be clothed, boarded and educated free of charge when in health, and where I'd get loving care and attention when sick.

Yes, and I'd want to *improve* on the old state of things, or else it wouldn't pay to change, don't you see? I'd want to find a man with fewer faults than my father had, and who would love me just as much as he did; yes, and I'd want to improve on the mother business, too, and get in somewhere with a gentle, refined woman, who'd have a great deal of patience with my pranks, and love me a little better than the other one had done—yes, I'd want to find a place filling all these conditions, or else, what in the mischief would be the use of making a change at all, old fellow? Don't you see?" and Mr. Medford passed his arm over the shoulders of the boy and patted him confidently.

Such talk and treatment as this from his father quite broke down the dogged resolution with which Arthur had set out on his trip, and he blurted out:

"But it's Julia, papa; there's no living in the house with her. She hates us boys——."

"Tut, tut, Arthur."

"She does; she told me, this morning, that four boys are too many for one house, and I told her I thought so, too, if they had her for a sister, and that I was going to run away. Then she tantalized me until I was provoked into saying those ugly words that you heard."

"Well, well; I ought to have known the other side before."

"You didn't think we'd blow on a girl, did you? We boys don't blow on each other."

"O, well, these little matters can soon be straightened out. Julia has been sick a good deal, and is nervous. But she has a good heart, and I know she loves her brothers. There's the whistle for the next station. Suppose you and I just step off the train when it stops, and return home together about noon, as though nothing had happened."

"Just as you say, papa; but I don't want Julia to think I hadn't the pluck to stay away half a day."

"Nonsense! banish such thoughts. Very likely she's crying her eyes out about you by this time."

And to Arthur's amazement, so he finds her. She is the first one to spring and embrace him, assuring him at once that less than four boys in that house can never be enough.

Afterward his mother holds him by the hand, stroking his hair, as she gently says:

"You thoughtlessly managed to give us a sad morning, my son. There's a young run-a-way in the basement who would be puzzled to guess why any boy should want to run away from this home. I shall want you to hear his story, by and by, and see for yourself what he has suffered."

MARIA BARRETT BUTLER.

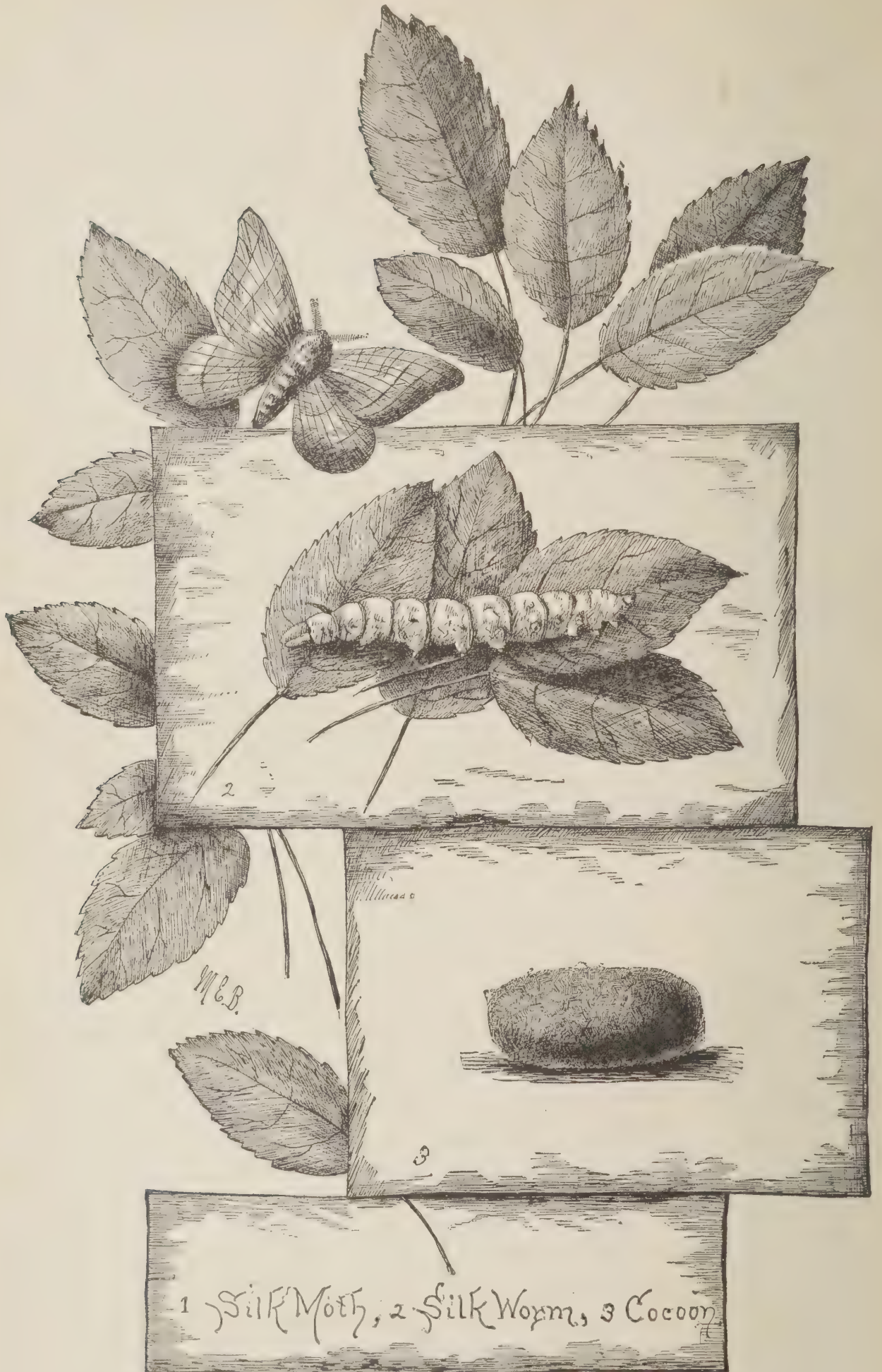
SILK WORMS.

The manufacture of silk is of very ancient date, and is supposed to have originated with the Chinese, who kept it a secret, and no power could induce them to divulge the method. It, however, gradually became known to other countries in various ways. It was carried into Persia by some monks who had resided a long time in China, and knowing that they would not be allowed openly to carry away the silk worm eggs, concealed them in a bamboo cane, and in this way the different varieties of silk worms were scattered over many parts of the world.

The *Bombyx mori* is the principal one of the silk-producing moths, and belongs to the family of *Lepidoptera* in which are some of the largest and most beautiful insects. It is of a grayish color, the body

of the male not half an inch long, and that of the female somewhat longer and stouter, while the wings are short and weak. The larva is without hair, of a gray or cream color, and from three to three and a half inches long. The silk vessels are two sacs running along the sides of the body, and open by one spinneret on the under lip of the larva.

When the larva is fully matured it proceeds to spin its cocoon, and from the silk sacs throws out a silken thread about four thousand yards long. While doing this it continually moves its head around for about three days. The cocoons are white or yellow in color, egg-shaped, and measure from an inch to an inch and a half in length, and from half an inch to an inch in diameter. They are like a hard



shell with some of the silky fibers on the outside.

In order to use the cocoons for silk, they are gathered before they are pierced by the moths in making their exits from the shell, thus bursting them and injuring the silk. Three or four days are required for the silk worms to spin their cocoons, and two or three days after they are gathered before the shells are burst. These perfect cocoons are the ones from which the silk is collected for mercantile purposes. When the cocoons are gathered the chrysalides have to be killed by

heat, either dry or steam heat, and are then sorted according to their size, color and quality. Great care is required in reeling the silk, that each strand may be of an even texture.

The Mulberry leaf is the principal food of the silk worm, and groves of the Mulberry tree are cultivated for this purpose.

It is a strange thought that silk, a fabric which is of such mercantile value all over the world, should be produced by such an insignificant looking little creature as the silk worm.

M. E. B.

GRANDMAMMA RAYMOND'S QUOTATIONS.

The following, from Mrs. C. B. CRANDALL, of Brookfield, N. Y., will interest the many readers of this department who have been entertained by Mrs. BUTLER'S "Grandmamma Raymond" in our last volume:

In the September number of VICK'S MAGAZINE for 1889, in "Heirlooms of Tale and Anecdote," Grandmamma gives a fragment of an old poem which my mother sang to me when I was a little girl, and as she might possibly be as pleased to see it, as my memory recalls it, as I was to see her quotation, I will send it.

Oh, poor man, Oh, poor man, Oh, tell unto me true,
How you maintain your family, and how you carry
them through?

Your family is large, and the most of them are small,
And nothing but your labor to maintain them all.

Sometimes I do reap, sometimes I do mow,
Sometimes hedging, sometimes ditching—such work
I often do;

There's nothing comes amiss to me, I harrow and I
plow,
I maintain my family by the sweat of my brow.

My wife, she is willing to hold up the yoke,
We live like lambs together, and never do provoke,

And though it may be possible that we do live poor,
Yet we can feed the beggar that comes to our door.

A nobleman, on hearing what the poor man did say,
Invited him to dine with him, the very next day,
He invited him, his wife and his seven children
small,
To all come and dine at this nobleman's hall.

It was early the next morning when this poor man
arose,
He dressed up all his children in the finest of their
clothes;
It was he and his wife and his seven children small,
They all came and dined at this nobleman's hall.

But soon, after dinner, he did let him know
What into this poor man's hands he had for to
bestow—

It was forty or fifty acres of good land
He gave to him in writing, and signed his own hand.

Mrs. R. C. ARCHER, of Pembroke, Ontario, writes that the author of the lines:

Some go to church just for a walk;
Some go there to laugh and talk;

&c., quoted by Mrs. BUTLER, on page 294 of last volume, is "the late Dean SWIFT, of St. Patrick's Cathedral, Dublin, Ireland."



EDITOR'S MISCELLANY.

TOMATOES.

The Agricultural Experiment Station of Cornell University, in this State, made tests, the past season, with different varieties of Tomatoes, and under different conditions. Some of the conclusions reached by these tests are as follows:

1. Frequent transplanting of the young plants, and good tillage are necessary to best results in Tomato culture.

2. Plants started under glass about ten weeks before transplanting into field gave fruits from a week to ten days earlier than those started two or three weeks later, while there was a much greater difference when the plants were started six weeks later. Productiveness was greatly increased by the early planting.

3. Liberal and even heavy manuring during the present season, gave great increase in yield over no fertilizing, although the common notion is quite to the contrary. Heavy manuring does not appear, therefore, to produce vines at the expense of fruit.

4. The tests indicate that poor soil may tend to render fruit more irregular.

DETROIT'S GREAT FESTIVAL.

Detroit is to have a great "Floral and Musical Charity Festival" from the 22d to the 25th of next April. Premiums to the amount of \$1,700 are offered to exhibitors of flowers and plants. The proceeds of this festival are to be distributed among the charitable institutions of Detroit, and all the town is interested. A similar festival was held there last year, which was a great financial success, and the present enterprise is on a much larger scale, and with a splendid prospect. Besides the charitable result it affects, it cannot fail to be a festival of refinement. It is an advance upon a barbecue or a bull fight, and we hope the people of Detroit may profit from it in all ways more than they hope. A chorus of six hundred voices is expected to be a feature of the music. There is also to be an art display. The *Detroit Journal* organized and promoted the festival of 1889, and is working with a will for the one now in prospect, but the whole community is helping it along.

HORTICULTURAL REPORT.

The very full report of the annual meeting of the Western New York Horticultural Society made in our pages, last year, gave the greatest satisfaction to fruit-growers and others. We have now made arrangements to give a verbatim report of all the discussions of the meeting to be held the last of this month, as elsewhere announced. Unless some unforeseen event shall frustrate our plans, we shall be able to lay before our readers the most complete report of this kind ever made. That it will be of great interest to fruit-growers it may be unnecessary to state, for all know the experience and ability of those engaged in fruit raising in this region.

MISSOURI BOTANICAL GARDEN

The Trustees of this institution, in accordance with the intention of its honored founder, propose to provide adequate theoretical and practical instruction for young men desirous of becoming gardeners. Only six scholarships will be awarded each year, commencing the first of April, and upon conditions of examination. The course is for three years, and is a splendid opportunity for young men to learn to

become thorough gardeners. Full particulars can be learned by applying to William Trelease, Director of the Missouri Botanical Garden, St. Louis, Missouri.

HARPER'S MAGAZINE.

Howard Pyle will contribute to *Harper's Magazine* for January the first of two papers on "Jamaica, New and Old," an artist's vision of the island, not only as it is to-day, but also as it was in times far away past, when slaver and sugar king made its history a romance, and the famous old heroes of the Black Roger resorted to its coasts. The paper has been elaborately illustrated by the author.

NEBRASKA HORTICULTURE.

The winter meeting of the Nebraska State Horticultural Society will be held at Lincoln, Neb, on the 14th, 15th and 16th of the present month. Judging from the programme which has been issued, it will undoubtedly be a meeting of great interest, and of great value to the horticulturists of that State. Full particulars can be learned from the Secretary, G. J. Carpenter, Fairbury, Nebraska.

HORTICULTURAL ASSOCIATION OF PENNSYLVANIA.

The annual meeting of this Association will be held at Mifflintown, Pa., January 15th and 16th, 1890. The meetings of this Association increase in interest every year, and the one now announced will undoubtedly be of great good to all. Circulars, programmes, and further information can be obtained of the Secretary, E. B. Engle, Waynesboro, Pa.

THE NEW YORK FLOWER MARKET.

This was the title of a well written article, by Elizabeth Bisland, in the December number of the *Cosmopolitan*. The illustrations were excellent. But this last remark will apply equally well to all the illustrations that now appear in this enterprising and always interesting magazine.

WESTERN NEW YORK HORTICULTURAL SOCIETY.

The thirty-fifth annual meeting of this Society will be held in Rochester, commencing Wednesday, January 22, 1890. The meeting promises to be a very interesting one, and the attendance will undoubtedly be large. The live horticulturists of this State and some others will be on hand.

CHAT.

Chat is a very interesting new monthly, containing papers for the times, stories, poetry, and notes on miscellaneous subjects, all very bright and entertaining. The Christmas number is very good. Issued by "Chat" Publishing Co., Philadelphia, Pa.

THE CENTURY FOR JANUARY

Will open with a remarkable paper, by Amelia B. Edwards, describing recent astonishing discoveries in Bubastis, Egypt. Fully illustrated. The authors of Lincoln, in the same number, describe in a most graphic manner his assassination and death.

AMERICAN HORTICULTURAL SOCIETY.

The annual meeting of this society will be held in Austin, Texas, on the 17th of February next. Further particulars can be learned by applying to the Secretary, W. H. Reagan, of Greencastle, Indiana.



J. Waller

COMMON MOSS ROSE.